

REMARKS

Claims 1-20 are pending.

Claims 1-13 and 18-20 were rejected.

Claims 14-17 are cancelled, herein.

Claims 6, 19 and 20 are amended, herein.

Claims 21-24 are new. No new matter is added.

Request for Continued Examination - 35 U.S.C. § 132(b) & 37 CFR § 1.114

As argued below, Applicant respectfully submits that the final rejection of all claims, as indicated in the Office Action dated January 9, 2008, was premature. However, in the event that the petition to withdraw finality is not granted, Applicant is filing herewith a Request for Continued Examination in order that the present response is considered timely filed. Authorization to pay the examination fee is included with this response.

PETITION TO WITHDRAW FINALITY

PREMATURE FINAL REJECTION

Applicant respectfully submits that the final rejection of this application was improper. No basis for providing a final rejection was provided in the Office Action dated January 9, 2008 (the “Office Action”). To the contrary, in addressing Applicant’s Response at the first paragraph on page 2 of the Office Action, the Examiner states, “Applicant’s arguments with respect to claims 1-13 and 18-20 have been considered but are moot in view of the new ground(s) of rejection.”

Applicant respectfully submits that it is improper to finally reject an application where Applicant’s response did not include an amendment of the claims or an IDS that necessitates a new grounds for rejection (MPEP 706.07a). Per the Examiner’s own admission on page 2 of the Office Action, it was Applicant’s argument which was considered in making the new grounds of rejection. Applicant notes that the Office Action was issued in response to Applicant’s prior Response after Final, dated December 14, 2007, in which no amendment of the claims was made. Applicant appreciates that the Examiner prepared a new office action, apparently in recognition that the final rejection dated October 17, 2007 was improper. However, if the Examiner had not issued an improper final rejection, then Applicant’s Response dated December

14, 2007 would not have been necessary. Applicant respectfully submits that the Examiner conducted a new patent search upon determining that Applicant's argument was found persuasive in overcoming the previous rejection. Because the new search was conducted as a result of Applicant's argument and the new grounds for rejection were not made on the basis of any claim amendment made by Applicant, it is respectfully submitted that the final rejection dated January 9, 2008 was also improper.

Drawing Objections

The Examiner objected to the drawings under 37 C.F.R. § 1.83(a) for failing to show step 106 to 114 in procedure 100 as described in the original specification at paragraph 0027.

Applicant respectfully believes this objection was made in error, and Applicant directs the Examiner's attention to the amendment of the specification, including paragraph 0027, that was made in the Response dated September 17, 2007. In that Response, paragraph 0027 was amended to identify steps S102 to S110 as shown in Figure 1. Applicant submits that in view of the prior amendment made in the specification, that the objection to the drawings is improper. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

Claim Rejections - 35 U.S.C. § 102

The Examiner rejected claims 1-4, 6-13, and 18-20 under 35 U.S.C. § 102(b) by Parker, *et al.* (U.S. Patent 5,323,247).

The rejection is traversed.

Claim 1 recites a method for reducing image noise in a scanned image, comprising:

decreasing a color level of the scanned image by reducing a number of bits of a full color level of one or more pixels in the scanned image to form a reduced color level image;

composing a pattern having less color level than the full color level; and recombining the full color level of the one or more pixels in the scanned image by combining the reduced color level image with the pattern.

Parker discloses a method of transmitting a halftone image, such as by using a facsimile machine. An image is scanned as a gray scale image (FIG. 4 and column 13 lines 64-68). The gray scale image is compressed to a halftone image by a transmitting device, as illustrated in FIG. 10 (e.g. by using a blue noise mask). The halftone image is restored by a receiving

facsimile device, using a decoding method illustrated by FIG. 11 (see column 22 lines 48-51 and column 23 lines 56-65).

The Examiner identifies the halftone image of Parker as disclosing the reduced color level image of claim 1. The Examiner further identifies block 1104 of FIG. 11 to disclose composing a pattern having less color level than the full color level. It is unclear to Applicant whether the Examiner intended the “desired halftone image” or the “mean halftone image” of block 1104 to disclose the reduced color level image, in view of his early reference to the halftone image identified at column 8 lines 51-61. Block 1104 of FIG. 11 indicates that the desired halftone image is produced by adding the mean halftone image with an error image. Applicant assumes that the Examiner intended the mean halftone image of Parker to correspond with the reduced color level image of claim 1, and the error image of Parker to correspond to the pattern of claim 1.

Claim 1 recites recombining the full color level of the one or more pixels in a scanned image. The desired halftone image of FIG. 11 is not a scanned image, rather Parker identifies the gray scale image as being a scanned image (column 13 lines 64-66). As such, even though the mean halftone image and error image are shown as being added together at block 1104 to produce the desired halftone image, Parker does not describe how this would result in recombining the full color level of the one or more pixels in a scanned image. Whereas FIG. 11 discloses a method for restoring a halftone image (e.g. the “desired halftone image”), the halftone image of FIGS. 10 and 11 described in Parker result in a “lossy” image as compared to the scanned gray scale image, wherein “the image is only approximately recovered” (column 23 lines 32-36). According to Parker, having a compressed lossy image enables “quick transmission of the encoded image by phone lines” (column 23 lines 41-51). Presumably, the lossy image is acceptable for facsimile transmissions.

Parker goes on to describe an inverse-halftoning method of FIG. 9, which may be utilized after the method of FIG. 11 to “approximately restore the original gray scale, or color channel” (column 23 lines 66-68). According to Parker “it is not possible to reconstruct the exact gray scale image because the forward process of halftoning is a lossy process” (column 20, lines 16-21). Whereas the additional steps of FIG. 9 fails to restore the original gray scale, clearly the preceding method of FIG. 11 would also fail to disclose recombining a full color level, otherwise the steps of FIG. 9 would be unnecessary. Accordingly, the method of FIG.

11 (and Parker generally) fails to disclose the features identified by the Examiner in rejecting claim 1. Accordingly, Applicant respectfully requests withdrawal of the rejection of claim 1.

Claims 2-4 and 7 are believed to be allowable as depending upon claim 1, as well as the further novel features recited therein. For example, claim 3 recites the method for reducing image noise of claim 1, wherein combining the reduced color level image with the pattern restores the one or more pixels to include a same number of bits as before the color level is decreased. On the other hand, Parker discloses that a desired halftone image is produced by adding a mean halftone image and an error image (FIG. 11 and column 22, lines 60-64). Whereas Parker acknowledges that the halftone image produced by the method of FIG. 11 is “lossy”, one skilled in the art would appreciate that this lossy image would not include a same number of bits as before the color level is decreased.

Applicant respectfully submits that the Examiner is failing to read the features of claim 3 in view of claim 1 upon which it depends, and which recites decreasing a color level of the scanned image by reducing a number of bits of a full color level of one or more pixels in the scanned image. Nothing in FIG. 11 and column 22 lines 48-68, as cited by the Examiner, suggests or describes a color level of one or more pixels in a scanned image. Rather, FIG. 11 addresses halftone images, which Parker admits are “lossy” images (column 23 lines 32-36). As previously mentioned the halftone images are not scanned images, but rather are derived from the gray scale image using a comparator and a blue noise mask (FIG. 4 and column 13 line 64 to column 14 line 7). Accordingly, the section cited by the Examiner fails on its face to disclose the features of claim 3, when read in view of claim 1.

Claim 7 recites the method for reducing image noise of claim 1, wherein the color level of the pattern depends on the number of bits reduced from the full color level. The Examiner rejected this claim by citing the same FIG. 11 and column 22 lines 48-68 as previously discussed with respect to claim 1. The Examiner suggests that the gray image corresponds to the scanned image of claim 1, and presumably that the error image corresponds to the pattern of claim 1. It does not logically follow how producing a desired halftone image from the error pattern and a mean halftone image as shown in FIG. 11 relates to a number of bits reduced from a full color level, where the full color level is recited in claim 1 as being a full color level of one or more pixels in the scanned image. As previously described, the desired halftone image of Parker is not a scanned image, and is admittedly “lossy” as compared to the scanned gray

scale image. Accordingly, Applicant respectfully submits that the rejection of claim 7 is also improper.

Applicant respectfully requests withdrawal of the rejection of claims 2-4 and 7.

Claims 6, 19 and 20 are amended without prejudice for grammatical purposes, and not to overcome the cited references. Amended claim 6 recites a method for reducing image, wherein the image is composed of a plurality of pixels having a scale of bits, comprising:

reducing a plurality of bits of the scale of each pixel in the image; and
recombining the scale of each pixel in the image, wherein recombining the scale of each pixel in the image comprises a halftone pattern method, wherein a pattern composed by the halftone pattern method is a matrix pattern, and wherein the row and column numbers of the matrix pattern are dependent on the number of bits reduced in the step of reducing a plurality of bits of the scale of each pixel in the image.

The Examiner cites column 8 lines 11-25 directed to reducing a gray image to a halftone image, as disclosing the claim feature of reducing a plurality of bits of scale of each pixel in the image. Accordingly, Applicant assumes that the Examiner is suggesting that the gray image corresponds to the image recited by claim 6. The Examiner next cites FIG. 11 and column 22 lines 48-68 as disclosing the features of recombining the scale of each pixel in the image. This analysis fails for a similar reason as previously provided in Applicant's arguments with respect to the rejection of claim 1, above. FIG. 11 and column 22 lines 48-68 relate to producing a desired halftone image.

Assuming for arguments sake that the gray image of Parker corresponds with the "image" recited by claim 6, nothing in the section cited by the Examiner (with regards to FIG. 11) refers to the gray image, let alone discloses to recombine the scale of each pixel in the image. Rather, the cited section describes that a desired halftone image is produced by adding together a mean halftone image and an error message. Parker fails to disclose how combining the mean halftone image and the error message could possibly disclose wherein the row and column numbers of a matrix pattern are dependent on the number of bits reduced in the step of reducing a plurality of bits of the scale of each pixel in the image, as recited by claim 6. In contrast, the error image of Parker is described as being the difference between the desired halftone image and the block mean halftone image. In view of the Examiner's argument that the gray image corresponds to the image recited by claim 6, it does not follow that the system of FIG. 11 (which does not even

refer to the gray image) could possibly disclose the features recited by claim 6. Accordingly, withdrawal of the rejection of claim 6 is respectfully requested.

Claims 8 and 18 recite similar features as described above with respect to claim 1, and are accordingly believed to be allowable for similar reasons. Claims 9-13 and 19-20 are believed to be allowable as depending on either of claims 8 or 18, as well as the further novel features recited therein. Withdrawal of the rejection of claims 9-13 and 19-20 is respectfully requested.

Claim Rejections - 35 U.S.C. § 103

The Examiner rejected claim 5 under 35 U.S.C. § 103(a) over Parker as applied to claim 1 above, and further in view of Young, *et al.* (U.S. Patent 6,269,193).

Claim 5 recites the method for reducing image noise of claim 1, wherein the number of bits reduced from the full color level is set to an image noise level.

The Examiner acknowledges that Kim fails to disclose the features of claim 5, and instead cites Young. Young discloses a method of compressing and decompressing a radiographic image. Young does not address color images in any of his embodiments or figures, nor is the word color even mentioned in Young's Detailed Description of the Invention. Accordingly Young could not be understood to disclose a number of bits reduced from a full color level. Since both Parker and Young fail to disclose the features of claim 5, Young fails to cure the deficiencies of Parker. Accordingly, claim 5 is believed to be allowable as depending on claim 1, as well as the further novel features recited therein. Withdrawal of the rejection of claim 5 is respectfully requested.

New Claims

Claims 21-24 are new. Consideration of claims 21-24 is respectfully requested. No new matter is added.

Any statements made by Examiner that are not addressed by Applicant do not necessarily constitute agreement by the Applicant. In some cases Applicant may have amended or argued the allowability of an independent claim thereby obviating grounds for rejection of the dependent claims.

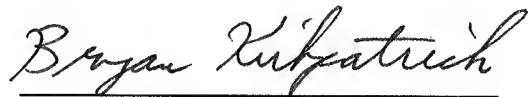
Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1-13 and 18-24 of the application as amended is requested. The Examiner is encouraged to telephone the undersigned at (503) 224-2170 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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